

Express Mail Label No.
ET 506 311 150 US

What is claimed is:

1. A method of beginning a data exchange over an RF communication link between a polling device and a sending device wherein the polling device has an interpoll gap time, the method comprising:

- (a) identifying by the sending device that the RF communication link is clear throughout a period which is at least as long as the maximum possible interpoll gap time under conditions solely when the RF communication link is heavily loaded; and
- (b) transmitting a request for poll frame by the sending device.

2. The method of claim 1 which comprises, before (a), a further act of branching to (b) if traffic on the wireless communication channel is below a predetermined level.

3. The method of claim 1 wherein the interpoll gap is a predetermined time period of fixed duration between consecutive poll frames.

4. The method of claim 1 wherein, in (a), if the beginning of the period coincides with a detected end of transmission, attempting to avoid collisions by delaying a random period before executing (b).

5. The method of claim 2 wherein, in (a), if the traffic is below the predetermined level, branching to (b) only when the sending device does not sense a carrier on the RF communication channel.

6. A method of beginning a data exchange over a wireless communication channel between a destination device and a sending device comprising:

waiting, by the sending device, a period of time that is at least as long as a predetermined time period and detecting no communication on the wireless communication channel;

attempting, by the sending device, to initiate communication to the destination device; and

if the attempt to initiate communication to the destination device proves successful, transmitting, by the sending device, a series of packets wherein each two consecutive packet transmissions are separated by no more than the predetermined time period.

7. The method of claim 6 wherein the destination device comprises a polling device.

8. The method of claim 6 wherein if the beginning of the period of time during which no communication is detected coincides with the end of a detected transmission, attempting to avoid collisions by delaying a random period before attempting to initiate communication to the destination device.

9. The method of claim 6 which comprises immediately attempting to initiate communication to the destination device if traffic on the wireless communication channel is below a predetermined level.

10. The method of claim 6 which comprises immediately attempting to initiate communication to the destination device when the sending device does not sense activity on the wireless communication channel, if traffic on the wireless communication channel is below a predetermined level.

11. A method of beginning a data exchange over a wireless communication channel between a destination device and a sending device comprising:

selecting a predetermined traffic level over the wireless communication channel;
determining that the traffic is below the predetermined traffic level;
transmitting a request for a poll frame by the sending device.

12. The method of claim 11 wherein the destination device comprises a polling device.

13. The method of claim 11 wherein after determining that the traffic is below the predetermined traffic level, transmitting a request for a poll frame only when the sending device does not sense a carrier on the wireless communication channel.

14. A method of beginning communication within a wireless communication network among a plurality of devices comprising:

determining whether communication is being performed from a first device of the plurality of devices to a second device of the plurality of device, the communication being performed on a communication channel within the wireless communication network;

initiating communication between the first device and the second device after determining that no communication is being performed; and

continuing the communication when the communication proves successful.

15. The method of claim 14 further comprising determining a level of communication that is being performed from the first device to the second device.

16. The method of claim 15 further comprising waiting a predetermined period of time before initiating communication when the level exceeds a predetermined threshold.

17. The method of claim 14 wherein the first device comprises a sending device.

18. The method of claim 14 wherein the second device comprises a receiving device.

19. The method of claim 14 wherein at least one of the first device and the second device comprises a polling device.

20. The method of claim 14 further comprising transmitting a request for poll frame by at least one of the first device and the second device.